Contents of Volume 68

January 2001

i This Month in the Journal Kathryn Beauregard

Articles

- 1 AT-Rich Palindromes Mediate the Constitutional t(11;22) Translocation
 L. Edelmann, E. Spiteri, K. Koren, V. Pulijaal, M. G. Bialer, A. Shanske, R. Goldberg, and B. E. Morrow
- 14 Fabry Disease: Preclinical Studies Demonstrate the Effectiveness of α-Galactosidase A Replacement in Enzyme-Deficient Mice Yiannis A. Ioannou, Ken M. Zeidner, Ronald E. Gordon, and Robert J. Desnick
- 26 Usher Syndrome 1D and Nonsyndromic Autosomal Recessive Deafness DFNB12 Are Caused by Allelic Mutations of the Novel Cadherin-Like Gene CDH23

Julie M. Bork, Linda M. Peters, Saima Riazuddin, Steve L. Bernstein, Zubair M. Ahmed, Seth L. Ness, Robert Polomeno, Arabandi Ramesh, Melvin Schloss, C. R. Srikumari Srisailpathy, Sigrid Wayne, Susan Bellman, Dilip Desmukh, Zahoor Ahmed, Shaheen N. Khan, Vazken M. Der Kaloustian, X. Cindy Li, Anil Lalwani, Sheikh Riazuddin, Maria Bitner-Glindzicz, Walter E. Nance, Xue-Zhong Liu, Graeme Wistow, Richard J. H. Smith, Andrew J. Griffith, Edward R. Wilcox, Thomas B. Friedman, and Robert J. Morell

- 38 Acheiropodia Is Caused by a Genomic Deletion in C7orf2, the Human Orthologue of the *Lmbr1* Gene P. Ianakiev, M. J. van Baren, M. J. Daly, S. P. A. Toledo, M. G. Cavalcanti, J. Correa Neto, E. Lemos Silveira, A. Freire-Maia, P. Heutink, M. W. Kilpatrick, and P. Tsipouras
- **46 Mutation Analysis of the Entire** *PKD1* **Gene: Genetic and Diagnostic Implications**Sandro Rossetti, Lana Strmecki, Vicki Gamble, Sarah Burton, Vicky Sneddon, Belén Peral, Sushmita Roy, Aysin Bakkaloglu, Radovan Komel, Christopher G. Winearls, and Peter C. Harris
- 64 Mutational Analysis in a Cohort of 224 Tuberous Sclerosis Patients Indicates Increased Severity of TSC2, Compared with TSC1, Disease in Multiple Organs

Sandra L. Dabora, Sergiusz Jozwiak, David Neal Franz, Penelope S. Roberts, Andres Nieto, Joon Chung, Yew-Sing Choy, Mary Pat Reeve, Elizabeth Thiele, John C. Egelhoff, Jolanta Kasprzyk-Obara, Dorota Domanska-Pakiela, and David J. Kwiatkowski

- 81 Genotypic and Phenotypic Spectrum in Tricho-Rhino-Phalangeal Syndrome Types I and III H.-J. Lüdecke, J. Schaper, P. Meinecke, P. Momeni, S. Groß, D. von Holtum, H. Hirche, M. J. Abramowicz, B. Albrecht, C. Apacik, H.-J. Christen, U. Claussen, K. Devriendt, E. Fastnacht, A. Forderer, U. Friedrich, T. H. J. Goodship, M. Greiwe, H. Hamm, R. C. M. Hennekam, G. K. Hinkel, M. Hoeltzenbein, H. Kayserili, F. Majewski, M. Mathieu, R. McLeod, A. T. Midro, U. Moog, T. Nagai, N. Niikawa, K. H. Ørstavik, E. Plöchl, C. Seitz, J. Schmidtke, L. Tranebjærg, M. Tsukahara, B. Wittwer, B. Zabel, G. Gillessen-Kaesbach, and B. Horsthemke
- 92 BMPR2 Haploinsufficiency as the Inherited Molecular Mechanism for Primary Pulmonary Hypertension Rajiv D Machado, Michael W. Pauciulo, Jennifer R. Thomson, Kirk B. Lane, Neil V. Morgan, Lisa Wheeler, John A. Phillips III, John Newman, Denise Williams, Nazzareno Galiè, Alessandra Manes, Keith McNeil, Magdi Yacoub, Ghada Mikhail, Paula Rogers, Paul Corris, Marc Humbert, Dian Donnai, Gunnar Martensson, Lisbeth Tranebjaerg, James E. Loyd, Richard C. Trembath, and William C. Nichols

103 Worldwide Genetic Analysis of the CFTR Region

Eva Mateu, Francesc Calafell, Oscar Lao, Batsheva Bonné-Tamir, Judith R. Kidd, Andrew Pakstis, Kenneth K. Kidd, and Jaume Bertranpetit

118 Hereditary Nonpolyposis Colorectal Cancer in 95 Families: Differences and Similarities between Mutation-Positive and Mutation-Negative Kindreds

Rodney J. Scott, Mary McPhillips, Cliff J. Meldrum, Patrick E. Fitzgerald, Kirsten Adams, Allan D. Spigelman, Desiree du Sart, Kathy Tucker, Judy Kirk, and Hunter Family Cancer Service

128 Genetics of Event-Related Brain Potentials in Response to a Semantic Priming Paradigm in Families with a History of Alcoholism

L. Almasy, B. Porjesz, J. Blangero, A. Goate, H. J. Edenberg, D. B. Chorlian, S. Kuperman, S. J. O'Connor, J. Rohrbaugh, L. O. Bauer, T. Foroud, J. P. Rice, T. Reich, and H. Begleiter

136 A Genome Scan for Renal Function among Hypertensives: the HyperGEN Study

Andrew T. DeWan, Donna K. Arnett, Larry D. Atwood, Michael A. Province, Cora E. Lewis, Steven C. Hunt, and John Eckfeldt

145 Analysis of European mtDNAs for Recombination

J. L. Elson, R. M. Andrews, P. F. Chinnery, R. N. Lightowlers, D. M. Turnbull, and Neil Howell

154 Use of Closely Related Affected Individuals for the Genetic Study of Complex Diseases in Founder Populations

C. Bourgain, E. Génin, P. Holopainen, K. Mustalahti, M. Mäki, J. Partanen, and F. Clerget-Darpoux

160 Lactase Haplotype Diversity in the Old World

Edward J. Hollox, Mark Poulter, Marek Zvarik, Vladimir Ferak, Amanda Krause, Trefor Jenkins, Nilmani Saha, Andrew I. Kozlov, and Dallas M. Swallow

173 Independent Histories of Human Y Chromosomes from Melanesia and Australia

Manfred Kayser, Silke Brauer, Gunter Weiss, Wulf Schiefenhövel, Peter A. Underhill, and Mark Stoneking

191 Extent and Distribution of Linkage Disequilibrium in Three Genomic Regions

Gonçalo R. Abecasis, Emiko Noguchi, Andrea Heinzmann, James A. Traherne, Sumit Bhattacharyya, Nicholas I. Leaves, Gavin G. Anderson, Youming Zhang, Nicholas J. Lench, Alisoun Carey, Lon R. Cardon, Miriam F. Moffatt, and William O. C. Cookson

198 Population Structure in Admixed Populations: Effect of Admixture Dynamics on the Pattern of Linkage Disequilibrium

C. L. Pfaff, E. J. Parra, C. Bonilla, K. Hiester, P. M. McKeigue, M. I. Kamboh, R. G. Hutchinson, R. E. Ferrell, E. Boerwinkle, and M. D. Shriver

Reports

208 A Mutation in the Gene for the Neurotransmitter Receptor-Clustering Protein Gephyrin Causes a Novel Form of Molybdenum Cofactor Deficiency

Jochen Reiss, Sigrid Gross-Hardt, Ernst Christensen, Peter Schmidt, Ralf R. Mendel, and Günter Schwarz

214 Precise Estimation of Allele Frequencies of Single-Nucleotide Polymorphisms by a Quantitative SSCP Analysis of Pooled DNA

Tomonari Sasaki, Tomoko Tahira, Akari Suzuki, Koichiro Higasa, Yoji Kukita, Shingo Baba, and Kenshi Hayashi

219 Mutations in the Hepatocyte Nuclear Factor-1β Gene Are Associated with Familial Hypoplastic Glomerulocystic Kidney Disease

Coralie Bingham, Michael P. Bulman, Sian Ellard, Lisa I. S. Allen, Graham W. Lipkin, William G. van't Hoff, Adrian S. Woolf, Gianfranco Rizzoni, Giuseppe Novelli, Anthony J. Nicholls, and Andrew T. Hattersley

225 CHRNB2 Is the Second Acetylcholine Receptor Subunit Associated with Autosomal Dominant Nocturnal Frontal Lobe Epilepsy

Hilary A. Phillips, Isabelle Favre, Martin Kirkpatrick, Sameer M. Zuberi, David Goudie, Sarah E. Heron, Ingrid E. Scheffer, Grant R. Sutherland, Samuel F. Berkovic, Daniel Bertrand, and John C. Mulley

232 Gene Preference in Maple Syrup Urine Disease

Mary M. Nellis and Dean J. Danner

- 238 Decrease of 3243 A→G mtDNA Mutation from Blood in MELAS Syndrome: A Longitudinal Study
 S. Rahman, J. Poulton, D. Marchington, and A. Suomalainen
- 241 A New Locus for Autosomal Dominant Dilated Cardiomyopathy Identified on Chromosome 6q12-q16 N. Sylvius, F. Tesson, C. Gayet, P. Charron, A. Bénaïche, M. Peuchmaurd, L. Duboscq-Bidot, J. Feingold, J. S. Beckmann, C. Bouchier, and M. Komajda
- 247 A Narrow Segment of Maternal Uniparental Disomy of Chromosome 7q31-qter in Silver-Russell Syndrome Delimits a Candidate Gene Region

Katariina Hannula, Marita Lipsanen-Nyman, Tero Kontiokari, and Juha Kere

254 DFNA25, a Novel Locus for Dominant Nonsyndromic Hereditary Hearing Impairment, Maps to 12q21-24

Charles C. Greene, Pamella M. McMillan, Susan E. Barker, Purnima Kurnool, Margaret I. Lomax, Margit Burmeister, and Marci M. Lesperance

- 261 The 28-kb Deletion Spanning D15S63 Is a Polymorphic Variant in the Ashkenazi Jewish Population Shira Silverstein, Israela Lerer, Karin Buiting, and Dvorah Abeliovich
- 264 Genetic and Physical Mapping of the Locus for Autosomal Dominant Renal Fanconi Syndrome, on Chromosome 15q15.3

U. Lichter-Konecki, K. W. Broman, E. B. Blau, and D. S. Konecki

269 A Second Locus for an Axonal Form of Autosomal Recessive Charcot-Marie-Tooth Disease Maps to Chromosome 19q13.3

Alejandro Leal, Bernal Morera, Gerardo Del Valle, Dieter Heuss, Corinna Kayser, Martin Berghoff, Ramón Villegas, Erick Hernández, María Méndez, Hans Christian Hennies, Bernhard Neundörfer, Ramiro Barrantes, André Reis, and Bernd Rautenstrauss

275 Primate DAX1, SRY, and SOX9: Evolutionary Stratification of Sex-Determination Pathway

Megha Patel, Karin S. Dorman, Yao-Hua Zhang, Bing-Ling Huang, Arthur P. Arnold, Janet S. Sinsheimer,

Megha Patel, Karin S. Dorman, Yao-Hua Zhang, Bing-Ling Huang, Arthur P. Arnold, Janet S. Sinsheimer Eric Vilain, and Edward R. B. McCabe

281 The Phylogeography of Brazilian Y-Chromosome Lineages

Denise R. Carvalho-Silva, Fabrício R. Santos, Jorge Rocha, and Sérgio D. J. Pena

Letters to the Editor

- 287 Inadequate Use of Molecular Hybridization to Analyze DNA in Neanderthal Fossils E. M. Geigl
- 290 Reply to Geigl Lutz Bachmann

Abstracts from 2000 ASHG Meeting

292 Abstracts of Papers Presented at Late-Breaking Research Session.

50th Annual ASHG Meeting, Philadelphia, PA, October 5, 2000

Announcements

295 Employment Opportunities; Fellowship Opportunity; Grants; Meeting; DNA Samples

Erratum

298 European Y-Chromosomal Lineages in Polynesians: A Contrast to the Population Structure Revealed by mtDNA

Hurles et al. (December 1998 [63:1793-1806])

February 2001

i This Month in the Journal Kathryn Beauregard

Review Article

299 Genetics of Schizophrenia and the New Millennium: Progress and Pitfalls
Miron Baron

Articles

- 313 Wild-Type Huntingtin Reduces the Cellular Toxicity of Mutant Huntingtin In Vivo Blair R. Leavitt, Julian A. Guttman, J. Graeme Hodgson, Gil H. Kimel, Roshni Singaraja, A. Wayne Vogl, and Michael R. Hayden
- 325 Periaxin Mutations Cause Recessive Dejerine-Sottas Neuropathy
 Cornelius F. Boerkoel, Hiroshi Takashima, Pawel Stankiewicz, Carlos A. Garcia, Steven M. Leber,
 Laila Rhee-Morris, and James R. Lupski
- 334 The Molecular Basis of 3-Methylcrotonylglycinuria, a Disorder of Leucine Catabolism

 M. Esther Gallardo, Lourdes R. Desviat, José M. Rodríguez, Jorge Esparza-Gordillo, Celia Pérez-Cerdá,
 Belén Pérez, Pilar Rodríguez-Pombo, Olga Criado, Raul Sanz, D. Holmes Morton, K. Michael Gibson, Thuy P. Le,
 Antonia Ribes, Santiago Rodríguez de Córdoba, Magdalena Ugarte, and Miguel Á. Peñalva
- 347 High Residual Activity of PMM2 in Patients' Fibroblasts: Possible Pitfall in the Diagnosis of CDG-la (Phosphomannomutase Deficiency)
 Stephanie Grünewald, Els Schollen, Emile Van Schaftingen, Jaak Jaeken, and Gert Matthiis
- 355 Bilineal Disease and Trans-Heterozygotes in Autosomal Dominant Polycystic Kidney Disease
 York Pei, Andrew D. Paterson, Kai Rong Wang, Ning He, Donna Hefferton, Terry Watnick, Greg G. Germino,
 Patrick Parfrey, Stefan Somlo, and Peter St. George-Hyslop
- 364 A Spectrum of FOXC1 Mutations Suggests Gene Dosage as a Mechanism for Developmental Defects of the Anterior Chamber of the Eye Darryl Y. Nishimura, Charles C. Searby, Wallace L. Alward, David Walton, Jamie E. Craig, David A. Mackey, Kazuhide Kawase, Adam B. Kanis, Shivanand R. Patil, Edwin M. Stone, and Val C. Sheffield
- 373 Measurement of Mutational Flow Implies Both a High New-Mutation Rate for Huntington Disease and Substantial Underascertainment of Late-Onset Cases

 Daniel Falush, Elisabeth W. Almqvist, Ryan R. Brinkmann, Yoh Iwasa, and Michael R. Hayden

386 A Novel Syndrome Affecting Multiple Mitochondrial Functions, Located by Microcell-Mediated Transfer to Chromosome 2p14-2p13

Agnieszka Seyda, Robert F. Newbold, Thomas J. Hudson, Andrei Verner, Neviana MacKay, Susan Winter, Annette Feigenbaum, Suzann Malaney, Diego Gonzalez-Halphen, Andrew P. Cuthbert, and Brian H. Robinson

397 A Genomewide Linkage-Disequilibrium Scan Localizes the Saguenay-Lac-Saint-Jean Cytochrome Oxidase Deficiency to 2p16

Nana Lee, Mark J. Daly, Terrye Delmonte, Eric S. Lander, Fenghao Xu, Thomas J. Hudson, Grant A. Mitchell, Charles C. Morin, Brian H. Robinson, and John D. Rioux

410 Variation in Cancer Risks, by Mutation Position, in BRCA2 Mutation Carriers

Deborah Thompson and Douglas Easton, on behalf of the Breast Cancer Linkage Consortium

420 After BRCA1 and BRCA2—What Next? Multifactorial Segregation Analyses of Three-Generation, Population-Based Australian Families Affected by Female Breast Cancer

Jisheng Cui, Antonis C. Antoniou, Gillian S. Dite, Melissa C. Southey, Deon J. Venter, Douglas F. Easton, Graham G. Giles, Margaret R. E. McCredie, and John L. Hopper

432 A Predominantly Indigenous Paternal Heritage for the Austronesian-Speaking Peoples of Insular Southeast Asia and Oceania

Cristian Capelli, James F. Wilson, Martin Richards, Michael P. H. Stumpf, Fiona Gratrix, Stephen Oppenheimer, Peter Underhill, Vincenzo L. Pascali, Tsang-Ming Ko, and David B. Goldstein

444 Genomic Divergences between Humans and Other Hominoids and the Effective Population Size of the Common Ancestor of Humans and Chimpanzees

Feng-Chi Chen and Wen-Hsiung Li

- 457 Problems in the Definition, Interpretation, and Evaluation of Genetic Heterogeneity
 Alice S. Whittemore and Jerry Halpern
- 466 Accounting for Unmeasured Population Substructure in Case-Control Studies of Genetic Association Using a Novel Latent-Class Model

Glen A. Satten, W. Dana Flanders, and Quanhe Yang

Reports

478 Clustering of Missense Mutations in the C-Terminal Region of Factor H in Atypical Hemolytic Uremic Syndrome

David Pérez-Caballero, Carolina González-Rubio, M. Esther Gallardo, Mariá Vera, Margarita López-Trascasa, Santiago Rodríguez de Córdoba, and Pilar Sánchez-Corral

485 Factor H Mutations in Hemolytic Uremic Syndrome Cluster in Exons 18–20, a Domain Important for Host Cell Recognition

Anna Richards, Mark R. Buddles, Rosemary L. Donne, Bernard S. Kaplan, Edwin Kirk, Michael C. Venning, Christian L. Tielemans, Judith A. Goodship, and Timothy H. J. Goodship

- 491 A Duplication in Chromosome 4q35 Is Associated with Hereditary Benign Intraepithelial Dyskeratosis
 R. Rand Allingham, Ben Seo, Evadnie Rampersaud, MaryLou Bembe, Pratap Challa, Ningpu Liu, Tanisha Parrish,
 Linda Karolak, John Gilbert, Margaret A. Pericak-Vance, Gordon K. Klintworth, and Jeffery M. Vance
- 495 A Second Gene for Otosclerosis, OTSC2, Maps to Chromosome 7q34-36

Kris Van Den Bogaert, Paul J. Govaerts, Isabelle Schatteman, Matthew R. Brown, Goele Caethoven, F. Erwin Offeciers, Thomas Somers, Frank Declau, Paul Coucke, Paul Van de Heyning, Richard J. H. Smith, and Guy Van Camp

501 Homozygosity Mapping of Portuguese and Japanese Forms of Ataxia-Oculomotor Apraxia to 9p13, and Evidence for Genetic Heterogeneity

Maria do Céu Moreira, Clara Barbot, Nobutada Tachi, Naoki Kozuka, Pedro Mendonça, José Barros, Paula Coutinho, Jorge Sequeiros, and Michel Koenig

- 509 A Novel Form of "Central Pouchlike" Cataract, with Sutural Opacities, Maps to Chromosome 15q21-22
 Vanita, Jai Rup Singh, Virinder K. Sarhadi, Daljit Singh, André Reis, Franz Rueschendorf,
 Johannes Becker-Follmann, Martin Jung, and Karl Sperling
- 515 A Quantitative-Trait Analysis of Human Plasma-Dopamine β -Hydroxylase Activity: Evidence for a Major Functional Polymorphism at the *DBH* Locus

Cyrus P. Zabetian, George M. Anderson, Sarah G. Buxbaum, Robert C. Elston, Hiroshi Ichinose,
Toshiharu Nagatsu, Kwang-Soo Kim, Chun-Hyung Kim, Robert T. Malison, Ioel Gelernter, and Joseph F. Cubells

- 523 Ancestral Origins of the Machado-Joseph Disease Mutation: A Worldwide Haplotype Study
 C. Gaspar, I. Lopes-Cendes, S. Hayes, J. Goto, K. Arvidsson, A. Dias, I. Silveira, P. Maciel, P. Coutinho, M. Lima, Y.-X. Zhou, B.-W. Soong, M. Watanabe, P. Giunti, G. Stevanin, O. Riess, H. Sasaki, M. Hsieh, G. A. Nicholson, E. Brunt, J. J. Higgins, M. Lauritzen, L. Tranebjaerg, V. Volpini, N. Wood, L. Ranum, S. Tsuji, A. Brice, J. Sequeiros, and G. A. Rouleau
- **529 Point Mutations of the mtDNA Control Region in Normal and Neurodegenerative Human Brains** P. F. Chinnery, G. A. Taylor, N. Howell, D. T. Brown, T. J. Parsons, and D. M. Turnbull
- 533 Random Genetic Drift Determines the Level of Mutant mtDNA in Human Primary Oocytes D. T. Brown, D. C. Samuels, E. M. Michael, D. M. Turnbull, and P. F. Chinnery
- Y-Chromosome Lineages Trace Diffusion of People and Languages in Southwestern Asia Lluís Quintana-Murci, Csilla Krausz, Tatiana Zerjal, S. Hamid Sayar, Michael F. Hammer, S. Qasim Mehdi, Qasim Ayub, Raheel Qamar, Aisha Mohyuddin, Uppala Radhakrishna, Mark A. Jobling, Chris Tyler-Smith, and Ken McElreavey

Letters to the Editor

543 Conflicting Reports of Imprinting Status of Human *GRB10* in Developing Brain: How Reliable Are Somatic Cell Hybrids for Predicting Allelic Origin of Expression?

Susanne Mergenthaler, Megan P. Hitchins, Nadya Blagitko-Dorfs, David Monk, Hartmut A. Wollmann, Michael B. Ranke, Hans-Hilger Ropers, Sophia Apostolidou, Philip Stanier, Michael A. Preece, Thomas Eggermann, Vera M. Kalscheuer, and Gudrun E. Moore

544 Reply to Mergenthaler et al.

Hiroshi Yoshihashi, Katsuhiro Maeyama, Rika Kosaki, Tsutomu Ogata, Masato Tsukahara, Yu-ichi Goto, Junichi Hata, Nobutake Matsuo, Robert J. Smith, and Kenjiro Kosaki

546 Founder Mutations of BRCA1 and BRCA2 in North American Families of Polish Origin That Are Affected with Breast Cancer

Patricia de los Rios, Elaine Jack, Graciela Kuperstein, Henry Lynch, Jan Lubinski, and Steven A. Narod

546 Vacuoliting Megalencephalic Leukoencephalopathy
Elon Pras

Book Review

548 Genetics and Analysis of Quantitative Traits. By Michael Lynch and Bruce Walsh Reviewed by Suzanne M. Leal

Announcements

550 Employment Opportunities; Fellowship Opportunities; Call for Abstracts; Call for Nominations; Conference; Employment Sought; Wellcome Trust 30th Advanced Course; Post-Doctoral Training Program; Call for Subjects

Errata

- 557 Hereditary Nonpolyposis Colorectal Cancer in 95 Families: Differences and Similarities between Mutation-Positive and Mutation-Negative Kindreds

 Scott et al. (January 2001 [68:118–127])
- 557 Periaxin Mutations Cause Recessive Dejerine-Sottas Neuropathy Boerkoel et al. (in this issue [68:325–333])

March 2001

i This Month in the Journal Kathryn Beauregard

Review Article

559 Connexin Mutations in Skin Disease and Hearing Loss
David P. Kelsell, Wei-Li Di, and Mark I, Houseman

Articles

569 Identification of the Gene for Oral-Facial-Digital Type I Syndrome
Maria I. Ferrante, Giovanna Giorgio, Sally A. Feather, Alessandro Bulfone, Victoria Wright, Michela Ghiani, Angelo Selicorni, Linda Gammaro, Francesco Scolari, Adrian S. Woolf, Odent Sylvie, Le Marec Bernard, Sue Malcolm, Robin Winter, Andrea Ballabio, and Brunella Franco

577 Bone Dysplasia Sclerosteosis Results from Loss of the SOST Gene Product, a Novel Cystine Knot-Containing Protein

Mary E. Brunkow, Jessica C. Gardner, Jeff Van Ness, Bryan W. Paeper, Brian R. Kovacevich, Sean Proll, John E. Skonier, L. Zhao, P. J. Sabo, Ying-Hui Fu, Reid S. Alisch, Lucille Gillett, Trenton Colbert, Paolo Tacconi, David Galas, Herman Hamersma, Peter Beighton, and John T. Mulligan

- 590 Spectrum of Perforin Gene Mutations in Familial Hemophagocytic Lymphohistiocytosis Kim Göransdotter Ericson, Bengt Fadeel, Sofie Nilsson-Ardnor, Cilla Söderhäll, AnnaCarin Samuelsson, Gritta Janka, Marion Schneider, Aytemiz Gürgey, Nevin Yalman, Tom Révész, R. Maarten Egeler, Kirsi Jahnukainen, Ingebjörg Storm-Mathiesen, Ásgeir Haraldsson, Janet Poole, Geneviève de Saint Basile, Magnus Nordenskjöld, and Jan-Inge Henter
- 598 Tissue-Specific Expression of a Splicing Mutation in the IKBKAP Gene Causes Familial Dysautonomia
 Susan A. Slaugenhaupt, Anat Blumenfeld, Sandra P. Gill, Maire Leyne, James Mull, Math P. Cuajungco,
 Christopher B. Liebert, Brian Chadwick, Maria Idelson, Luba Reznik, Christiane M. Robbins, Izabela Makalowska,
 Michael J. Brownstein, Daniel Krappmann, Claus Scheidereit, Channa Maayan, Felicia B. Axelrod,
 and James F. Gusella

606 Genetic and Mutational Analyses of a Large Multiethnic Bardet-Biedl Cohort Reveal a Minor Involvement of *BBS6* and Delineate the Critical Intervals of Other Loci

Philip L. Beales, Nicholas Katsanis, Richard A. Lewis, Stephen J. Ansley, Nursel Elcioglu, Jamal Raza, Michael O. Woods, Jane S. Green, Patrick S. Parfrey, William S. Davidson, and James R. Lupski

617 Origin of the Mutations in the *parkin* Gene in Europe: Exon Rearrangements Are Independent Recurrent Events, whereas Point Mutations May Result from Founder Effects

Magali Periquet, Christoph B. Lücking, Jenny R. Vaughan, Vincenzo Bonifati, Alexandra Dürr, Giuseppe De Michele, Martin W. Horstink, Matt Farrer, Sergei N. Illarioshkin, Pierre Pollak, Michel Borg, Christine Brefel-Courbon, Patrice Denefle, Giuseppe Meco, Thomas Gasser, Monique M. B. Breteler, Nick W. Wood, Yves Agid, Alexis Brice, the French Parkinson's Disease Genetics Study Group, and the European Consortium on Genetic Susceptibility in Parkinson's Disease

627 Analyses of the Effects That Disease-Causing Missense Mutations Have on the Structure and Function of the Winged-Helix Protein FOXC1

Ramsey A. Saleem, Sharmila Banerjee-Basu, Fred B. Berry, Andreas D. Baxevanis, and Michael A. Walter

- 642 Compound Heterozygosity for a Recurrent 16.5-kb *Alu*-Mediated Deletion Mutation and Single-Base-Pair Substitutions in the *ABCC6* Gene Results in Pseudoxanthoma Elasticum Franziska Ringpfeil, Aoi Nakano, Jouni Uitto, and Leena Pulkkinen
- Use of Homozygosity Mapping to Identify a Region on Chromosome 1 Bearing a Defective Gene That Causes Autosomal Recessive Homozygous Hypercholesterolemia in Two Unrelated Families Emily R. Eden, Rossitza P. Naoumova, Jemima J. Burden, Mark I. McCarthy, and Anne K. Soutar
- 661 Genomewide Genetic Linkage Analysis Confirms the Presence of Susceptibility Loci for Schizophrenia, on Chromosomes 1q32.2, 5q33.2, and 8p21-22 and Provides Support for Linkage to Schizophrenia, on Chromosomes 11q23.3-24 and 20q12.1-11.23

Hugh M. D. Gurling, Gursharan Kalsi, Jon Brynjolfson, Thordur Sigmundsson, Robin Sherrington, Baljinder S. Mankoo, Timothy Read, Patrice Murphy, Ekaterina Blaveri, Andrew McQuillin, Hannes Petursson, and David Curtis

674 Association between a Single-Nucleotide Polymorphism in the Promoter of the Human Interleukin-3 Gene and Rheumatoid Arthritis in Japanese Patients, and Maximum-Likelihood Estimation of Combinatorial Effect That Two Genetic Loci Have on Susceptibility to the Disease

Ryo Yamada, Toshihiro Tanaka, Motoko Unoki, Tatsuo Nagai, Tetsuji Sawada, Yozo Ohnishi, Tatsuhiko Tsunoda, Masao Yukioka, Akira Maeda, Kenji Suzuki, Hiroomi Tateishi, Takahiro Ochi, Yusuke Nakamura, and Kazuhiko Yamamoto

- 686 Complex HLA-DR and -DQ Interactions Confer Risk of Narcolepsy-Cataplexy in Three Ethnic Groups Emmanuel Mignot, Ling Lin, William Rogers, Yutaka Honda, Xiaohong Qiu, Xiaoyan Lin, Michele Okun, Hirohiko Hohjoh, Tetsuro Miki, Susan H. Hsu, Mary S. Leffell, F. Carl Grumet, Marcelo Fernandez-Vina, Makoto Honda, and Neil Risch
- 700 Prevalence and Penetrance of Germline BRCA1 and BRCA2 Mutations in a Population Series of 649 Women with Ovarian Cancer

Harvey A. Risch, John R. McLaughlin, David E. C. Cole, Barry Rosen, Linda Bradley, Elaine Kwan, Elaine Jack, Danny J. Vesprini, Graciela Kuperstein, John L. A. Abrahamson, Isabel Fan, Betty Wong, and Steven A. Narod

711 A Phase 1/2 Clinical Trial of Enzyme Replacement in Fabry Disease: Pharmacokinetic, Substrate Clearance, and Safety Studies

Christine M. Eng, Maryam Banikazemi, Ronald E. Gordon, Martin Goldman, Robert Phelps, Leona Kim, Alan Gass, Jonathan Winston, Steven Dikman, John T. Fallon, Scott Brodie, Charles B. Stacy, Davendra Mehta, Rosaleen Parsons, Karen Norton, Michael O'Callaghan, and Robert J. Desnick

- 723 mtDNA and the Islands of the North Atlantic: Estimating the Proportions of Norse and Gaelic Ancestry
 Agnar Helgason, Eileen Hickey, Sara Goodacre, Vidar Bosnes, Kári Stefánsson, Ryk Ward, and Bryan Sykes
- 738 Patterns of Ancestral Human Diversity: An Analysis of Alu-Insertion and Restriction-Site Polymorphisms W. S. Watkins, C. E. Ricker, M. J. Bamshad, M. L. Carroll, S. V. Nguyen, M. A. Batzer, H. C. Harpending, A. R. Rogers, and L. B. Jorde

Reports

753 Familial Dysautonomia Is Caused by Mutations of the IKAP Gene

Sylvia L. Anderson, Rocco Coli, Ira W. Daly, Elizabeth A. Kichula, Matthew J. Rork, Sabrina A. Volpi, Josef Ekstein, and Berish Y. Rubin

759 Complete Loss of P/Q Calcium Channel Activity Caused by a CACNA1A Missense Mutation Carried by Patients with Episodic Ataxia Type 2

Serena Guida, Flavia Trettel, Stefano Pagnutti, Elide Mantuano, Angelita Tottene, Liana Veneziano, Tommaso Fellin, Maria Spadaro, Kenneth A. Stauderman, Mark E. Williams, Stephen Volsen, Roel A. Ophoff, Rune R. Frants, Carla Jodice, Marina Frontali, and Daniela Pietrobon

765 Atypical Forms of Incontinentia Pigmenti in Male Individuals Result from Mutations of a Cytosine Tract in Exon 10 of NEMO (IKK-γ)

Swaroop Aradhya, Gilles Courtois, Aleks Rajkovic, Richard Alan Lewis, Moise Levy, Alain Israël, and David L. Nelson

772 A Progressive Autosomal Recessive Cataract Locus Maps to Chromosome 9q13-q22

Elise Héon, Andrew D. Paterson, Michael Fraser, Gail Billingsley, Megan Priston, Aubin Balmer, Daniel F. Schorderet, Andrei Verner, Thomas J. Hudson, and Francis L. Munier

778 A New Locus for Autosomal Dominant Familial Exudative Vitreoretinopathy Maps to Chromosome 11p12-13

L. M. Downey, T. J. Keen, E. Roberts, D. C. Mansfield, M. Bamashmus, and C. F. Inglehearn

782 In Southern Africa, Brown Oculocutaneous Albinism (BOCA) Maps to the OCA2 Locus on Chromosome 15q: P-Gene Mutations Identified

Prashiela Manga, Jennifer G. R. Kromberg, Angela Turner, Trefor Jenkins, and Michele Ramsav

788 Linkage of Benign Familial Infantile Convulsions to Chromosome 16p12-q12 Suggests Allelism to the Infantile Convulsions and Choreoathetosis Syndrome

Roberto Caraballo, Sylvana Pavek, Arnaud Lemainque, Marguerite Gastaldi, Bernard Echenne, Jacques Motte, Pierre Genton, Ricardo Cersósimo, Véronique Humbertclaude, Natalio Fejerman, Anthony P. Monaco, Mark G. Lathrop, Jacques Rochette, and Pierre Szepetowski

- 795 Analysis of the Prostate Cancer–Susceptibility Locus HPC20 in 172 Families Affected by Prostate Cancer Cathryn H. Bock, Julie M. Cunningham, Shannon K. McDonnell, Daniel J. Schaid, Brett J. Peterson, Robert J. Pavlic, Jennifer J. Schroeder, Jason Klein, Amy J. French, Angela Marks, Stephen N. Thibodeau, Ethan M. Lange, and Kathleen A. Cooney
- 802 Random Intracellular Drift Explains the Clonal Expansion of Mitochondrial DNA Mutations with Age J. L. Elson, D. C. Samuels, D. M. Turnbull, and P. F. Chinnery

Letters to the Editor

807 Estimation of Sibling Recurrence-Risk Ratio under Single Ascertainment in Two-Child Families
Priya J. Wickramaratne and Susan E. Hodge

810 Reply to Wickramaratne and Hodge

Announcements

813 Employment Opportunities; Fellowship Opportunity; Call for Abstracts; Conference; Employment Sought

Erratum

818 Mutations in FOXC2 (MFH-1), a Forkhead Family Transcription Factor, Are Responsible for the Hereditary Lymphedema-Distichiasis Syndrome
Fang et al. (December 2000 [67:1382–1388])

April 2001

i This Month in the *journal* Kathryn Beauregard

2000 ASHG Presidential Address

819 On Discovery, Genomes, The Society, and Society Ronald G. Worton

2000 ASHG Award for Excellence in Education

- 826 Introductory Speech for F. Clarke Fraser Dorothy Warburton
- 828 Resetting our Educational Sights: Unconstructing the Public's Dreams and Nightmares of the Genetic Revolution

 E. Clarke Fraser

Articles

831 Mutations of MLC1 (KIAA0027), Encoding a Putative Membrane Protein, Cause Megalencephalic Leukoencephalopathy with Subcortical Cysts

Peter A. J. Leegwater, Bao Qiang Yuan, Jeffrey van der Steen, Joyce Mulders, Andrea A. M. Könst, P. K. Ilja Boor, Vlatka Mejaski-Bosnjak, Silvère M. van der Maarel, Rune R. Frants, Cees B. M. Oudejans, Ruud B. H. Schutgens, Jan C. Pronk, and Marjo S. van der Knaap

839 Cloning of Dimethylglycine Dehydrogenase and a New Human Inborn Error of Metabolism, Dimethylglycine Dehydrogenase Deficiency

Barbara A. Binzak, Ron A. Wevers, Sytske H. Moolenaar, Yu-May Lee, Wuh-Liang Hwu, Jo Poggi-Bach, Udo F. H. Engelke, Heidi M. Hoard, Joseph G. Vockley, and Jerry Vockley

- 848 Disruption of a Novel Gene (IMMP2L) by a Breakpoint in 7q31 Associated with Tourette Syndrome
 Erwin Petek, Christian Windpassinger, John B. Vincent, Joseph Cheung, Andrew P. Boright, Stephen W. Scherer,
 Peter M. Kroisel, and Klaus Wagner
- Neuronal Sodium-Channel α1-Subunit Mutations in Generalized Epilepsy with Febrile Seizures Plus
 R. H. Wallace, I. E. Scheffer, S. Barnett, M. Richards, L. Dibbens, R. R. Desai, T. Lerman-Sagie, D. Lev,
 A. Mazarib, N. Brand, B. Ben-Zeev, I. Goikhman, R. Singh, G. Kremmidiotis, A. Gardner, G. R. Sutherland,
 A. L. George Jr., J. C. Mulley, and S. F. Berkovic

866 A Novel SCN1A Mutation Associated with Generalized Epilepsy with Febrile Seizures Plus—and Prevalence of Variants in Patients with Epilepsy

Andrew Escayg, Armin Heils, Bryan T. MacDonald, Karsten Haug, Thomas Sander, and Miriam H. Meisler

874 Olfactory Receptor-Gene Clusters, Genomic-Inversion Polymorphisms, and Common Chromosome Rearrangements

Sabrina Giglio, Karl W. Broman, Naomichi Matsumoto, Vladimiro Calvari, Giorgio Gimelli, Thomas Neumann, Hirofumi Ohashi, Lucille Voullaire, Daniela Larizza, Roberto Giorda, Jim L. Weber, David H. Ledbetter, and Orsetta Zuffardi

884 Melanocortin-1 Receptor Gene Variants Determine the Risk of Nonmelanoma Skin Cancer Independently of Fair Skin and Red Hair

Maarten T. Bastiaens, Jeannet A. C. ter Huurne, Christine Kielich, Nelleke A. Gruis, Rudi G. J. Westendorp, Bert Ian Vermeer, and Ian Nico Bouwes Bayinck

895 Localization of a Novel Locus for Autosomal Recessive Early-Onset Parkinsonism, *PARK6*, on Human Chromosome 1p35-p36

Enza Maria Valente, Anna Rita Bentivoglio, Peter H. Dixon, Alessandro Ferraris, Tamara Ialongo, Marina Frontali, Alberto Albanese, and and Nicholas W. Wood

901 Evaluation of Linkage and Association of HPC2/ELAC2 in Patients with Familial or Sporadic Prostate Cancer

Jianfeng Xu, Siqun L. Zheng, John D. Carpten, Nina N. Nupponen, Christiane M. Robbins, Juanita Mestre, Tracy Y. Moses, A. Dennis A. Faith, Brian D. Kelly, Sarah D. Isaacs, Kathleen E. Wiley, Charles M. Ewing, Piroska Bujnovszky, Bao-li Chang, Joan Bailey-Wilson, Eugene R. Bleecker, Patrick C. Walsh, Jeffrey M. Trent, Deborah A. Meyers, and William B. Isaacs

912 HPC2 Variants and Screen-Detected Prostate Cancer

Danny Vesprini, Robert K. Nam, John Trachtenberg, Michael A. S. Jewett, Sean V. Tavtigian, Marjan Emami, Minnie Ho, Ants Toi, and Steven A. Narod

- 918 Whole-Genome Screening in Ankylosing Spondylitis: Evidence of Non-MHC Genetic-Susceptibility Loci S. H. Laval, A. Timms, S. Edwards, L. Bradbury, S. Brophy, A. Milicic, L. Rubin, K. A. Siminovitch, D. E. Weeks, A. Calin, B. P. Wordsworth, and M. A. Brown
- 927 A Genomewide Screen in Multiplex Rheumatoid Arthritis Families Suggests Genetic Overlap with Other Autoimmune Diseases

Damini Jawaheer, Michael F. Seldin, Christopher I. Amos, Wei V. Chen, Russell Shigeta, Joanita Monteiro, Marlene Kern, Lindsey A. Criswell, Salvatore Albani, J. Lee Nelson, Daniel O. Clegg, Richard Pope, Harry W. Schroeder Jr., S. Louis Bridges Jr., David S. Pisetsky, Ryk Ward, Daniel L. Kastner, Ronald L. Wilder, Theodore Pincus, Leigh F. Callahan, Donald Flemming, Mark H. Wener, and Peter K. Gregersen

- 937 Multipoint Linkage-Disequilibrium–Mapping Approach Based on the Case-Parent Trio Design Kung-Yee Liang, Fang-Chi Hsu, Terri H. Beaty, and Kathleen C. Barnes
- **951** Assessment of Parent-of-Origin Effects in Linkage Analysis of Quantitative Traits Robert L. Hanson, Sayuko Kobes, Robert S. Lindsay, and William C. Knowler
- 963 Efficient Multipoint Linkage Analysis through Reduction of Inheritance Space Kyriacos Markianos, Mark J. Daly, and Leonid Kruglyak
- **978** A New Statistical Method for Haplotype Reconstruction from Population Data Matthew Stephens, Nicholas J. Smith, and Peter Donnelly

990 An Extensive Analysis of Y-Chromosomal Microsatellite Haplotypes in Globally Dispersed Human Populations

Manfred Kayser, Michael Krawczak, Laurent Excoffier, Patrick Dieltjes, Daniel Corach, Vincente Pascali, Christian Gehrig, Luigi F. Bernini, Jorgen Jespersen, Egbert Bakker, Lutz Roewer, and Peter de Knijff

1019 High-Resolution Analysis of Human Y-Chromosome Variation Shows a Sharp Discontinuity and Limited Gene Flow between Northwestern Africa and the Iberian Peninsula

Elena Bosch, Francesc Calafell, David Comas, Peter J. Oefner, Peter A. Underhill, and Jaume Bertranpetit

Reports

1030 Axonemal Dynein Intermediate-Chain Gene (*DNAI1*) Mutations Result in Situs Inversus and Primary Ciliary Dyskinesia (Kartagener Syndrome)

Cécile Guichard, Marie-Cécile Harricane, Jean-Jacques Lafitte, Philippe Godard, Marc Zaegel, Vincent Tack, Guy Lalau, and Patrice Bouvagnet

1036 A Genetic Factor for Age-Related Cataract: Identification and Characterization of a Novel Galactokinase Variant, "Osaka," in Asians

Yoshiyuki Okano, Minoru Asada, Akie Fujimoto, Akira Ohtake, Koichiro Murayama, Kwang-Jen Hsiao, Kyuchul Choeh, Yanling Yang, Qixiang Cao, Juergen K. V. Reichardt, Shizuhiro Niihira, Takuji Imamura, and Tsunekazu Yamano

1043 Limitations of Chromosome Classification by Multicolor Karyotyping

Charles Lee, David Gisselsson, Charlotte Jin, Ann Nordgren, David O. Ferguson, Elisabeth Blennow, Jonathan A. Fletcher, and Cynthia C. Morton

1048 Shwachman-Diamond Syndrome with Exocrine Pancreatic Dysfunction and Bone Marrow Failure Maps to the Centromeric Region of Chromosome 7

Sharan Goobie, Maja Popovic, Jodi Morrison, Lynda Ellis, Hedy Ginzberg, Graeme R. B. Boocock, Nadia Ehtesham, Christine Bétard, Carl G. Brewer, Nicole M. Roslin, Thomas J. Hudson, Kenneth Morgan, T. Mary Fujiwara, Peter R. Durie, and Johanna M. Rommens

- 1055 Homozygosity Mapping Places the Acrodermatitis Enteropathica Gene on Chromosomal Region 8q24.3 Kun Wang, Elizabeth W. Pugh, Shari Griffen, Kimberly F. Doheny, Wedad Z. Mostafa, Mustafa M. al-Aboosi, Hatem el-Shanti, and Jane Gitschier
- 1061 Linkage Analysis of a Complex Pedigree with Severe Bipolar Disorder, Using a Markov Chain Monte Carlo Method

Chad Garner, L. Alison McInnes, Susan K. Service, Mitzi Spesny, Eduardo Fournier, Pedro Leon, and Nelson B. Freimer

Letter to the Editor

1065 Correcting for a Potential Bias in the Pedigree Disequilibrium Test

Eden R. Martin, Meredyth P. Bass, and Norman L. Kaplan

Book Review

1068 Principles of Molecular Oncology. Edited by Miguel H. Bronchud, MaryAnn Foote, William P. Peters, and Murry O. Robinson Reviewed by Robert Jenkins

Announcements

1069 Employment Opportunities; Fellowship Opportunities; Call for Abstracts; Call for Patients; Meetings; Courses

Errata

1075 Y-Chromosomal Diversity in Europe Is Clinal and Influenced Primarily by Geography, Rather than by Language

Rosser et al. (December 2000 [67:1526–1543])

- 1075 A Second Gene for Otosclerosis, OTSC2, Maps to Chromosome 7q34-36 Van Den Bogaert et al. (February 2001 [68:495–500])
- 1075 Genomewide Genetic Linkage Analysis Confirms the Presence of Susceptibility Loci for Schizophrenia, on Chromosomes 1q32.2, 5q33.2, and 8p21-22 and Provides Support for Linkage to Schizophrenia, on Chromosomes 11q23.3-24 and 20q12.1-11.23

 Gurling et al. (March 2001 [68:661-673])

May 2001

i This Month in the Journal Kathryn Beauregard

Articles

- 1077 Identification and Expression Analysis of Spastin Gene Mutations in Hereditary Spastic Paraplegia Ingrid K. Svenson, Allison E. Ashley-Koch, P. Craig Gaskell, Travis J. Riney, W. J. Ken Cumming, Helen M. Kingston, Edward L. Hogan, Rose-Mary N. Boustany, Jeffery M. Vance, Martha A. Nance, Margaret A. Pericak-Vance, and Douglas A. Marchuk
- 1086 Transaldolase Deficiency: Liver Cirrhosis Associated with a New Inborn Error in the Pentose Phosphate Pathway

Nanda M. Verhoeven, Jojanneke H. J. Huck, Birthe Roos, Eduard A. Struys, Gajja S. Salomons, Adriaan C. Douwes, Marjo S. van der Knaap, and Cornelis Jakobs

- 1093 MECP2 Mutations in Sporadic Cases of Rett Syndrome Are Almost Exclusively of Paternal Origin R. Trappe, F. Laccone, J. Cobilanschi, M. Meins, P. Huppke, F. Hanefeld, and W. Engel
- 1102 Up-Regulation of WNT-4 Signaling and Dosage-Sensitive Sex Reversal in Humans
 Brian K. Jordan, Mansoor Mohammed, Saunders T. Ching, Emmanuèle Délot, Xiao-Ning Chen, Phoebe Dewing, Amanda Swain, P. Nagesh Rao, B. Rafael Elejalde, and Eric Vilain
- 1110 Mortality in Neurofibromatosis 1: An Analysis Using U.S. Death Certificates Sonja A. Rasmussen, Quanhe Yang, and J. M. Friedman
- 1119 Identification of a New Candidate Locus for Uric Acid Nephrolithiasis

 Maria Neve Ombra, Paola Forabosco, Stefania Casula, Andrea Angius, Gianbattista Maestrale, Enrico Petretto,
 Giuseppina Casu, Giacomo Colussi, Enzo Usai, Paola Melis, and Mario Pirastu
- 1130 Characterization of Mutations in the *CPO* Gene in British Patients Demonstrates Absence of Genotype-Phenotype Correlation and Identifies Relationship between Hereditary Coproporphyria and Harderoporphyria

Jérôme Lamoril, Hervé Puy, Sharon D. Whatley, Caroline Martin, Jacqueline R. Woolf, Vasco Da Silva, Jean-Charles Deybach, and George H. Elder

1139 Linkage and Association Analysis of Angiotensin I-Converting Enzyme (ACE)-Gene Polymorphisms with ACE Concentration and Blood Pressure

Xiaofeng Zhu, Nourdine Bouzekri, Lorraine Southam, Richard S. Cooper, Adebowale Adeyemo, Colin A. McKenzie, Amy Luke, Guangiie Chen, Robert C. Elston, and Ryk Ward

1149 A Major Locus for Fasting Insulin Concentrations and Insulin Resistance on Chromosome 6q with Strong Pleiotropic Effects on Obesity-Related Phenotypes in Nondiabetic Mexican Americans

Ravindranath Duggirala, John Blangero, Laura Almasy, Rector Arya, Thomas D. Dyer, Kenneth L. Williams, Robin L. Leach, Peter O'Connell, and Michael P. Stern

- 1165 International Collaboration Provides Convincing Linkage Replication in Complex Disease through Analysis of a Large Pooled Data Set: Crohn Disease and Chromosome 16

 The IBD International Genetics Consortium
- 1172 Recent Origin and Spread of a Common Lithuanian Mutation, G197del LDLR, Causing Familial Hypercholesterolemia: Positive Selection Is Not Always Necessary to Account for Disease Incidence among Ashkenazi Jews

Ronen Durst, Roberto Colombo, Shoshi Shpitzen, Liat Ben Avi, Yechiel Friedlander, Roni Wexler, Frederick J. Raal, David A. Marais, Joep C. Defesche, Michail Y. Mandelshtam, Maritha J. Kotze, Eran Leitersdorf, and Vardiella Meiner

- 1189 Regression Models for Linkage Heterogeneity Applied to Familial Prostate Cancer Daniel J. Schaid, Shannon K. McDonnell, and Stephen N. Thibodeau
- 1197 Model-Free Linkage Analysis with Covariates Confirms Linkage of Prostate Cancer to Chromosomes 1 and 4

Katrina A. B. Goddard, John S. Witte, Brian K. Suarez, William J. Catalona, and Jane M. Olson

- **1207** Segregation Analyses of 1,476 Population-Based Australian Families Affected by Prostate Cancer Jisheng Cui, Margaret P. Staples, John L. Hopper, Dallas R. English, Margaret R. E. McCredie, and Graham G. Giles
- **1219** A Confidence-Set Approach for Finding Tightly Linked Genomic Regions Shili Lin, James A. Rogers, and Jason C. Hsu
- 1229 Complexity and Power in Case-Control Association Studies
 Jeffrey A. Longmate
- 1238 Transformation of Sib-Pair Values for the Haseman-Elston Method Daolong Wang, Shili Lin, Rong Cheng, Xin Gao, and Fred A. Wright
- 1250 Transmission/Disequilibrium Test Meets Measured Haplotype Analysis: Family-Based Association Analysis
 Guided by Evolution of Haplotypes
 Howard Seltman, Kathryn Roeder, and B. Devlin

Reports

- 1264 Localization of a Gene (MCUL1) for Multiple Cutaneous Leiomyomata and Uterine Fibroids to Chromosome 1q42.3-q43
 - N. A. Alam, S. Bevan, M. Churchman, E. Barclay, K. Barker, E. E. M. Jaeger, H. M. Nelson, E. Healy,
 - A. C. Pembroke, P. S. Friedmann, K. Dalziel, E. Calonje, J. Anderson, P. J. August, M. G. Davies, R. Felix,
 - C. S. Munro, M. Murdoch, J. Rendall, S. Kennedy, I. M. Leigh, D. P. Kelsell, I. P. M. Tomlinson, and R. S. Houlston

1270 Localization of the Gene for Distal Hereditary Motor Neuronopathy VII (dHMN-VII) to Chromosome 2q14

Meriel McEntagart, Nadine Norton, Hywel Williams, M. Dawn Teare, Melanie Dunstan, Philip Baker, Henry Houlden, Mary Reilly, Nick Wood, Peter S. Harper, P. Andrew Futreal, Nigel Williams, and Nazneen Rahman

- 1277 The Primary Erythermalgia–Susceptibility Gene Is Located on Chromosome 2q31-32

 Joost P. H. Drenth, Wayne H. Finley, Guido J. Breedveld, Leon Testers, Jan J. Michiels, G. Guillet, Alain Taieb, R. Lee Kirby, and Peter Heutink
- 1283 Paternal Uniparental Isodisomy of Chromosome 20q—and the Resulting Changes in GNAS1
 Methylation—as a Plausible Cause of Pseudohypoparathyroidism

 Murat Bastepe, Andrew H. Lane, and Harald Jüppner
- 1290 Disruption of the Bipartite Imprinting Center in a Family with Angelman Syndrome
 Karin Buiting, Angela Barnicoat, Christina Lich, Marcus Pembrey, Sue Malcolm, and Bernhard Horsthemke
- 1295 Null RPGRIP1 Alleles in Patients with Leber Congenital Amaurosis Thaddeus P. Dryja, Scott M. Adams, Jonna L. Grimsby, Terri L. McGee, Dong-Hyun Hong, Tiansen Li, Sten Andréasson, and Eliot L. Berson
- 1299 Heteroplasmy of the Human mtDNA Control Region Remains Constant during Life Maria Lagerström-Fermér, Charlotta Olsson, Lars Forsgren, and Ann-Christine Syvänen
- 1302 Broad and Narrow Heritabilities of Quantitative Traits in a Founder Population Mark Abney, Mary Sara McPeek, and Carole Ober

Announcements

1308 Employment Opportunities; Certification Examinations; Conferences

Erratum

1313 High Frequency of Alkaptonuria in Slovakia: Evidence for the Appearance of Multiple Mutations in HGO Involving Different Mutational Hot Spots

Zatkova et al. (November 2000 [67:1333–1339])

June 2001

i This Month in the Journal Kathryn Beauregard

Invited Editorial

1315 The Mitochondrial Gene Tree Comes of Age Martin Richards and Vincent Macaulay

Articles

1321 Autosomal Dominant Craniometaphyseal Dysplasia Is Caused by Mutations in the Transmembrane Protein ANK

Ernst Reichenberger, Valdenize Tiziani, Shoji Watanabe, Lucy Park, Yasuyoshi Ueki, Carla Santanna, Scott T. Baur, Rita Shiang, Dorothy K. Grange, Peter Beighton, Jessica Gardner, Herman Hamersma, Sean Sellars, Rajkumar Ramesar, Andrew C. Lidral, Annmarie Sommer, Cassio M. Raposo do Amaral, Robert J. Gorlin, John B. Mulliken, and Bjorn R. Olsen

- 1327 De Novo Mutations in the Sodium-Channel Gene SCN1A Cause Severe Myoclonic Epilepsy of Infancy Lieve Claes, Jurgen Del-Favero, Berten Ceulemans, Lieven Lagae, Christine Van Broeckhoven, and Peter De Jonghe
- 1333 Nemaline Myopathy Caused by Mutations in the Muscle α-Skeletal-Actin Gene
 Biljana Ilkovski, Sandra T. Cooper, Kristen Nowak, Monique M. Ryan, Nan Yang, Christina Schnell,
 Hayley J. Durling, Laurence G. Roddick, Ian Wilkinson, Andrew J. Kornberg, Kevin J. Collins, Geoff Wallace,
 Peter Gunning, Edna C. Hardeman, Nigel G. Laing, and Kathryn N. North
- 1344 Large-Scale Deletion and Point Mutations of the Nuclear NDUFV1 and NDUFS1 Genes in Mitochondrial Complex I Deficiency

Paule Bénit, Dominique Chretien, Nohman Kadhom, Pascale de Lonlay-Debeney, Valérie Cormier-Daire, Aguinaldo Cabral, Sylviane Peudenier, Pierre Rustin, Arnold Munnich, and Agnès Rötig

- 1353 Missense Mutations in the N-Terminal Domain of Human Phenylalanine Hydroxylase Interfere with Binding of Regulatory Phenylalanine
 Torben Gjetting, Marie Petersen, Per Guldberg, and Flemming Güttler
- 1361 Niemann-Pick C Variant Detection by Altered Sphingolipid Trafficking and Correlation with Mutations within a Specific Domain of NPC1

Xiaofeng Sun, David L. Marks, Walter D. Park, Christine L. Wheatley, Vishwajeet Puri, John F. O'Brien, Daniel L. Kraft, Patrick A. Lundquist, Marc C. Patterson, Richard E. Pagano, and Karen Snow

1373 Niemann-Pick C1 Disease: Correlations between NPC1 Mutations, Levels of NPC1 Protein, and Phenotypes Emphasize the Functional Significance of the Putative Sterol-Sensing Domain and of the Cysteine-Rich Luminal Loop

Gilles Millat, Christophe Marçais, Catherine Tomasetto, Karim Chikh, Anthony H. Fensom, Klaus Harzer, David A. Wenger, K. Ohno, and Marie T. Vanier

1386 The Molecular Basis of X-Linked Spondyloepiphyseal Dysplasia Tarda

A. K. Gedeon, G. E. Tiller, M. Le Merrer, S. Heuertz, L. Tranebjaerg, D. Chitayat, S. Robertson, I. A. Glass, R. Savarirayan, W. G. Cole, D. L. Rimoin, B. G. Kousseff, H. Ohashi, B. Zabel, A. Munnich, J. Gecz, and J. C. Mulley

1398 A Recurrent RNA-Splicing Mutation in the SEDL Gene Causes X-Linked Spondyloepiphyseal Dysplasia Tarda

George E. Tiller, Vickie L. Hannig, Damon Dozier, Laura Carrel, Karrie C. Trevarthen, William R. Wilcox, Stefan Mundlos, Jonathan L. Haines, Agi K. Gedeon, and Jozef Gecz

1408 Medium-Chain Acyl-CoA Dehydrogenase (MCAD) Mutations Identified by MS/MS-Based Prospective Screening of Newborns Differ from Those Observed in Patients with Clinical Symptoms: Identification and Characterization of a New, Prevalent Mutation That Results in Mild MCAD Deficiency

Brage Storstein Andresen, Steve F. Dobrowolski, Linda O'Reilly, Joseph Muenzer, Shawn E. McCandless, Dianne M. Frazier, Szabolcs Udvari, Peter Bross, Inga Knudsen, Rick Banas, Donald H. Chace, Paul Engel, Edwin W. Naylor, and Niels Gregersen

1419 Dominant Inheritance of Sialuria, an Inborn Error of Feedback Inhibition

Jules G. Leroy, Raili Seppala, Marjan Huizing, George Dacremont, Helena De Simnel, Rudy N. Van Coster, Edwin Orvisky, Donna M. Krasnewich, and William A. Gahl

- 1428 Effects of 5' Regulatory-Region Polymorphisms on Paraoxonase-Gene (PON1) Expression Victoria H. Brophy, Rachel L. Jampsa, James B. Clendenning, Laura A. McKinstry, Gail P. Jarvik, and Clement E. Furlong
- 1437 Genomewide Screen and Identification of Gene-Gene Interactions for Asthma-Susceptibility Loci in Three U.S. Populations: Collaborative Study on the Genetics of Asthma
 Jianfeng Xu, Deborah A. Meyers, Carole Ober, Malcolm N. Blumenthal, Beverly Mellen, Kathleen C. Barnes, Richard A. King, Lucille A. Lester, Timothy D. Howard, Julian Solway, Carl D. Langefeld, Terri H. Beaty, Stephen S. Rich, Eugene R. Bleecker, Nancy J. Cox, and the Collaborative Study on the Genetics of Asthma
- 1447 The Effect That Genotyping Errors Have on the Robustness of Common Linkage-Disequilibrium Measures
 Joshua M. Akey, Kun Zhang, Momiao Xiong, Peter Doris, and Li Jin
- 1457 Evaluation of Candidate Genes in Case-Control Studies: A Statistical Method to Account for Related Subjects
 S. L. Slager and D. J. Schaid
- 1463 The Power to Detect Linkage Disequilibrium with Quantitative Traits in Selected Samples Gonçalo R. Abecasis, William O. C. Cookson, and Lon R. Cardon
- 1475 Phylogenetic Network for European mtDNA Saara Finnilä, Mervi S. Lehtonen, and Kari Majamaa
- 1485 Genetic Differentiation in South Amerindians Is Related to Environmental and Cultural Diversity: Evidence from the Y Chromosome
 Eduardo Tarazona-Santos, Denise R. Carvalho-Silva, Davide Pettener, Donata Luiselli, Gian Franco De Stefano,
 Cristina Martinez Labarga, Olga Rickards, Chris Tyler-Smith, Sérgio D. J. Pena, and Fabrício R. Santos

Reports

- **X-Linked Creatine-Transporter Gene (***SLC6A8***) Defect: A New Creatine-Deficiency Syndrome** Gajja S. Salomons, Silvy J. M. van Dooren, Nanda M. Verhoeven, Kim M. Cecil, William S. Ball, Ton J. Degrauw, and Cornelis Jakobs
- 1501 The Human Aminophospholipid-Transporting ATPase Gene ATP10C Maps Adjacent to UBE3A and Exhibits Similar Imprinted Expression

 Laura B. K. Herzing, Soo-Jeong Kim, Edwin H. Cook, Jr., and David H. Ledbetter
- 1506 Impaired Heme Binding and Aggregation of Mutant Cystathionine β-Synthase Subunits in Homocystinuria
 Miroslav Janošík, Jana Oliveriusová, Bohumila Janošíková, Jitka Sokolová, Eva Kraus, Jan P. Kraus, and Viktor Kožich
- 1514 Evidence for a Susceptibility Gene for Autism on Chromosome 2 and for Genetic Heterogeneity Joseph D. Buxbaum, Jeremy M. Silverman, Christopher J. Smith, Mario Kilifarski, Jennifer Reichert, Eric Hollander, Brian A. Lawlor, Michael Fitzgerald, David A. Greenberg, and Kenneth L. Davis
- 1521 Benign Familial Infantile Convulsions: Mapping of a Novel Locus on Chromosome 2q24 and Evidence for Genetic Heterogeneity

 Michela Malacarne, Elena Gennaro, Francesca Madia, Sarah Pozzi, Daniela Vacca, Baldassare Barone, Bernardo dalla Bernardina, Amedeo Bianchi, Paolo Bonanni, Pasquale De Marco, Antonio Gambardella, Lucio Giordano, Maria Luisa Lispi, Antonino Romeo, Enrica Santorum, Francesca Vanadia, Marilena Vecchi, Pierangelo Veggiotti, Federico Vigevano, Franco Viri, Franca Dagna Bricarelli, and Federico Zara
- 1527 Equivalence between Haseman-Elston and Variance-Components Linkage Analyses for Sib Pairs
 P. C. Sham and S. Purcell

Letters to the Editor

- 1533 Is Breast Cancer Part of the Tumor Spectrum of Hereditary Nonpolyposis Colorectal Cancer? H. F. A. Vasen, H. Morreau, and J. W. R. Nortier
- 1534 Reply to Vasen et al. Rodney J. Scott
- 1535 Mitochondria and the Quality of Human Gametes
 Francesco Giannelli

Announcements

1538 Employment Opportunities

Erratum

1542 Microsatellite Polymorphism in the Heme Oxygenase-1 Gene Promoter Is Associated with Susceptibility to Emphysema

Yamada et al. (January 2000 [66:187–195])

1545 Contents of Volume 68

Information for Contributors

